

Response to Office Action dated May 3, 2007
U.S. Serial No. 10/540,712

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled)
 2. (Previously Presented) A frequency converter, for construction site devices operated with an electrical current having a higher frequency than line frequency, the frequency converter comprising:
 - a converter device for converting the electrical current frequency; and
 - a housing that surrounds the converter device,
the housing comprising
 - a converter receptacle that surrounds a board chamber for the converter device,
 - a housing segment that is connected to the converter receptacle, that is isolated from the converter receptacle that acts as a cooling area, inside which there are situated cooling air ducts and a fan that is suitable for conveying cooling air through the cooling air ducts, and
 - in the cooling area, 1) an external, first annular profile, and 2) additional annular profiles are oriented to one another in relation to the axis of the first annular profile in such a way that the annular profiles surround each other with a distance from one another, transverse to a main axial direction of the housing, so as to form at least two annular chambers that act as cooling air ducts;
- wherein the annular profiles are situated inside the first annular profile end with an axial spacing from the separating wall of the converter receptacle so as to form an air deflection area that acts as a cooling air duct,

wherein the cooling area has a transformer chamber, adjacent to the cooling air ducts, for accommodating an isolating transformer for producing an output voltage that differs from a line voltage.

3 - 5. (Cancelled)

6. (Previously Presented) A frequency converter, for construction site devices operated with an electrical current having a higher frequency than line frequency, the frequency converter comprising:

- a converter device for converting the electrical current frequency; and
- a housing that surrounds the converter device,
the housing comprising
 - a converter receptacle that surrounds a board chamber for the converter device,
 - a housing segment that is connected to the converter receptacle, that is isolated from the converter receptacle that acts as a cooling area, inside which there are situated cooling air ducts and a fan that is suitable for conveying cooling air through the cooling air ducts, and
 - in the cooling area, 1) an external, first annular profile, and 2) additional annular profiles are oriented to one another in relation to the axis of the first annular profile in such a way that the annular profiles surround each other with a distance from one another, transverse to a main axial direction of the housing, so as to form at least two annular chambers that act as cooling air ducts;

wherein the annular profiles are situated inside the first annular profile end with an axial spacing from the separating wall of the converter receptacle so as to form an air deflection area that acts as a cooling air duct,

wherein the fan is situated inside the first annular profile, coaxial thereto, in such a way that it is suited to draw a cooling air stream into the fan via one of the annular chambers, to guide the cooling air stream past at least a part of the separating wall in the air deflection area, and to

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expel the cooling air stream via a different annular chamber according to a counterflow principle, and

wherein, adjacent to the first annular profile, there is situated a second annular profile that surrounds an annular transformer chamber that is limited inwardly by a third annular profile.

7. (Previously Presented) The frequency converter according to Claim 6, wherein, in order to form a heat sink, the third annular profile is made up of an outer ring and an inner ring, cooling fins being situated in an area between the outer and inner rings that form a wall of one of the annular chambers acting as cooling air ducts.

8. (Previously Presented) The frequency converter according to Claim 7, wherein a part of the cooling fins connects the outer ring and the inner ring to one another, and wherein between the cooling fins, fins are situated on the outer ring that protrude radially inward.

9. (Cancelled)

10. (Previously Presented) The frequency converter according to Claim 6, wherein the transformer chamber can be closed in the axial direction by annular covers that extend between an outer limitation, by the second annular profile, and an inner limitation, by the third annular profile, of the transformer chamber.

11. (Previously Presented) The frequency converter according to Claim 6, wherein the transformer chamber contains a toroidal core transformer assembly.

12 - 15. (Cancelled)

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16. (Previously Presented) The frequency converter according to Claim 6, wherein the third annular profile is centered in relation to the second annular profile, which is adjacent to the first annular profile, by a cover that closes the transformer chamber.

17. (Previously Presented) The frequency converter according to Claim 6, wherein the fan is situated such that it draws cooling air into the fan via the annular chamber adjacent to the first, outer annular profile, and conducts the cooling of air to the outside via the annular chamber enclosed by the transformer chamber.

18 - 20. (Cancelled)